HealthCo Royal
Automatic Pump & Mattress

Fully Automatic Pump & Full Depth Replacement System

USER MANUAL

HealthCo Ltd
The Croft House, York Lane, Morthen, Rotherham, South Yorkshire S66 9JH
TEL: +44 (0)1709 278 036 EMAIL: enquiries@healthcoltd.co.uk
WEB: www.healthcoltd.co.uk

CONTENTS

Important Safeguards 1

1. The Purpose of this Manual 2
2. Product Description – Intended Use. 2
3. General Safety 2
4. Contraindications for Use 2
5. Intended User Profile 2
6. Installation Guide 3
7. Operation Instruction 5
8. Maintenance & Troubleshooting 6
9. Cleaning & Disinfection Protocol 6
10. Specification 8
11. EMC Related Notification 8
12. Waste Disposal 13
13. Storage and Care 13
14. Symbols Used 13
15. Expected Service Life 13
16. Warranty 14
17. Disclaimer 14

IMPORTANT SAFEGUARDS

When using electrical products, especially when children are present, basic safety precautions should always be followed, including the following:

This device can be used in home healthcare and professional healthcare environment.

DANGER - READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

DANGER – To reduce the risk of electrocution:

1. Always unplug this product immediately after using.
2. Do not use while bathing.
3. Do not place or store product where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for product that has fallen into water. Unplug immediately.

WARNING – To reduce the risk of burns, electrocution, fire or injury to persons:

1. A product should never be left unattended when plugged in.
2. Close supervision is necessary when this product is used by, on, or near children or physically challenged individuals.
3. Use this product only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
4. Never operate this product if it has a damaged cord or plug, if it is not working properly, if it is has been dropped or damaged, or dropped into water. Return the product to a service centre for examination and repair.
5. Keep the cord away from heated surfaces.
6. Never block the air opening of this product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.
7. Never drop or insert any object into any openings.
8. Do not use outdoors or operate where aerosol (spray) products are being used or where oxygen is being administered.
9. DISCONNECT FROM SUPPLY CIRCUIT BEFORE OPENING.
10. The product has no user serviceable parts except for fuse replacement.
11. Keep the pump and sleeve away from sources of liquid and open flames.
12. Keep the pump and sleeve away from sharp objects.
13. If pain, irritation, numbness, swelling, or redness occurs discontinue use and contact a healthcare professional.
14. Power cable & pump shall be placed at the foot-side of the patient to prevent any risk of strangulation due to cable.

1.THE PURPOSE OF THIS MANUAL

This operation manual is mainly focused on the set up, cleaning and routine maintenance of the HealthCo Royal Alternating Replacement System. We recommend keeping this manual available to answer questions related to the system.

2. INTENDED USE

The HealthCo Royal Alternating Full Replacement System is primarily used for the treatment and prevention of decubitus ulcers. HealthCo Royal Alternating Full Replacement System comprises the latest technology in alternating mattress therapy which enables the mattress to perform accurate pressure setting to individual patient's needs. The Mattress System is intended for use by those who are youth to geriatric.

3. GENERAL SAFETY

It is important to read the information in this user manual before you use your HealthCo Royal system.

Please follow the guidelines below for your added safety and maintaining system performance.

- Maximum patient weight is 150kg for overlay and 180kg for replacement
- Avoid exposing pump to liquids.
- When cleaning do not use of Phenol based substances.
- Use HealthCo Royal pump with a HealthCo Royal mattresses only.
- This HealthCo Royal Alternating Full Replacement Mattress must be used on top of a bed frame.

4. CONSTRAINTS FOR USE

The HealthCo Royal Alternating System should not be applied to patients suffering from polytrauma with fractures of spine, pelvis, extremities and skull. Patients with neurological impairments and missing body perception need their physician's prescription. Alternating pressure should not be applied to pain or pain-sensitive patients.

People who suffer from allergies against any of the substances used for mattress or cells body should not be positioned on the mattress.

This product is designed for users whose age is above 12 years.

5. INTENDED USER PROFILE

- Education/Knowledge: 12 years+
- Language understanding:
  - Read and understand 'Westernised Arabic' numerals when written in Arial font
  - Understands hygiene
- Experience Requirement: Professional nursing support
- Permissible impairments: Except for constraints listed
- User cannot be the operator.
- This device can be used in home and professional healthcare environment.

6. INSTALLATION GUIDE

1. Unpack the system and place the control unit at the foot end of the bed.
2. Remove the existing mattress from the bed.
3. Place the HealthCo Royal Alternating Full Replacement System directly onto the bed frame and position the air hose at the foot end of bed (mattress top cover indicates foot end).
4. Secure the HealthCo Royal mattress straps to the bed frame. .
5. Hang the control unit on the foot board of the bed frame.
6. Connect the mattress air hose to the pump.
7. Unzip the top cover to open up the inside of the mattress for checking purposes. Check air hoses inside the mattress to make sure air hoses are not kinked and that the CPR valve is set to "CLOSE" position (Fig. 2).
8. Plug in the control unit and turn it on.
9. When pump is turned on, the pump will default to "MAX" mode to quickly inflate the air mattress. The inflation time may take up to 45 minutes. During this process the "AUTO" LED indicator will be flashing to indicate automatic weight detection function is enabled. **NOTE:** Air mattress inflation time will be reduced if the air mattress is already partially inflated.
10. When the air mattress is fully inflated, the pump will default to "Alternate" mode with "AUTO" weight detection enabled. The user can now be positioned on the mattress.
11. The comfort setting can be manually adjusted by pressing the "Comfort" key to select a desired comfort from Soft to Firm. Pressing down repeatedly on the "Comfort" setting button will bring the control unit back to "AUTO" mode. **NOTE:** "AUTO" mode will stop functioning when the manual adjustment through "Pressure Setting" key is selected.
12. The air mattress pressure is constantly monitored by the control unit. Therefore, when the pressure in the air mattress is lower than the set pressure, the "PRESSURE LOSS" indicator will be illuminated and an audible alarm will be triggered after 5 minutes if the control unit fails to inflate the mattress to the set pressure within the time.

COMFORT CHECK

Re-check the pressure control setting on the pump unit. If required press Pressure Setting buttons to increase or decrease the required firmness of the mattress using the patient weight as an initial starting guideline.

Note: Manually adjusting the pressure setting level will overwrite the AUTO detection function.

HAND CHECK

To check the patient is being properly supported, slide one hand in between the underside of the air mattress base and the bed frame surface to ensure that the patient is not 'bottoming' out. A gap of 1-2 inches between patients buttocks and bed base is an acceptable range and an indication of correct pressure setting.

NOTE: We advise that the care giver performs the above 'Hand-Check' procedure on a regularly basis during pump in operation.

13. In the case of a Power Failure, the pump will initiate visual and audible alarms to alert the caregiver.

14. If an emergency mattress deflation is required, turn the CPR valve to "OPEN" position (Fig. 1). The mattress should deflate within 30 seconds. To close CPR valve simply turn the valve to the "CLOSE" position (Fig. 2).

Fig. 1 Turn the dial to **OPEN** position to release air.

Fig. 2 Turn the dial to **CLOSE** position to inflate air mattress.

The mattress should be fully inflated after approximately 45 minutes. If not, check the CPR valve is set to "CLOSE" position and the air hose is firmly connected to the control unit.

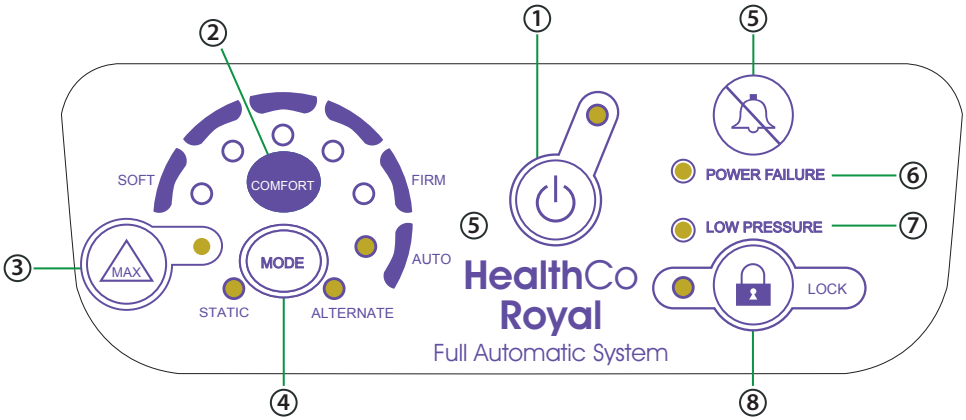
Please ensure the mattress cover is fully zipped and CPR is set to "CLOSE" position after an inspection. Once the mattress is fully inflated, patient can be positioned on to mattress.

IMPORTANT: Please ensure that all care staff are trained and familiarised with the mattress and this function.

⚠ **CAUTION: During power outage, pump will stop functioning and the POWER LED indicator will be flashing with an amber light and will alert user of a power failure also with an audible alarm. The pump will return to its normal operation when power is resumed.**

7. OPERATION INSTRUCTION

Master Control Unit Features



Description Item

1. Power Switch – Power On (Green LED), Standby (Amber LED),
2. Pressure Setting Button - allows for manual adjustment of pressures by pressing "Comfort" button to select a desired comfort from "soft" to "Firm" . Repeatedly pressing the button will bring the control unit back to "AUTO" mode.
   ("AUTO" feature is enabled by default Max)
3. Max – fast inflates the mattress to maximum pressure in static mode to perform nursing procedure
4. Mode Button-allows for manual select Static or Alternating Mode
   (MODE Sequence: DYNAMIC -> STATIC)
   Static Mode-press to inflate the mattress to a static surface. The pump will default back to alternating mode after 20 minutes.
   Alternate Mode – inflates mattress in alternating mode
5. Alarm Mute –Press to mute the audio alarm and deferrers to 20 minutes if the problem is not resolved.
6. Power Failure Indicator- Flashes an Amber LED and sounds an audio alarm to indicate a power outage situation.
7. Pressure Lost Indicator-Flashes an Amber LED to indicate when control unit fails to inflate the mattress to the set pressure and will sound 5 mins after the visual alarm.
8. Lock/Unlock button allows user to manually lock/unlock the control panel for unwanted attempt.

MATTRESS FEATURES

- Alternating therapy to prevent and treat pressure ulcers
- Modularized design for easy air cell replacement
- A vapour permeable, pliable and stretchable nylon top cover provides low shear, friction and moisture protection
- Heavy duty polyester bottom cover

Function	Pressure (mmHg)
MAX	60
AUTO	30~50
SOFTER	20
SOFT	25
MEDIUM	30
FIRM	40
FIRMER	50

8. MAINTENANCE & TROUBLESHOOTING

No daily maintenance is required. Or to maintain the condition of the alternating mattress system, service the system regularly according to the schedule recommended by your distributor. This equipment should only be serviced by a qualified and authorised technicians. For common trouble shooting tips please refer to the table below.

Symptom	Inspection Procedures	Possible Solution
The control unit is not functioning	1. Check for power source connection 2. Check for blown fuses	1. Connect to proper power source 2. Replace fuse 3. Refer to qualified service technician if problem persists
PRESSURE LOSS LED is constantly illuminated or the mattress is not inflating while control unit is in operation	1. Check for air leak from air hoses connections. 2. Check for CPR valve 3. Check for air leak from air cells	1. Ensure all connections are properly secured 2. Ensure CPR valve is set to "CLOSE" position 3. Replace damaged air cell if necessary 4. Refer to qualified service technician if problem persists
Pump is noisy	1. Make sure pump is resting against a solid surface	1. Reposition the pump 2. Refer to qualified service technician if problem persist

If the problem is not resolved, please contact your sales representative for advice.

5. CLEANING & DISINFECTION PROTOCOL

It is very important to have a strict cross infection, cleaning and disinfection policy in line with current Hospital/Nursing Home infection control guidelines.

1. Remove the bedding.
2. If necessary, inflate the mattress.
3. Ensure that the power unit is off.
4. Unplug the power cord from the wall outlet.
5. Ensure that the underside of the mattress is clear of all sharp objects.
6. Examine the surface of the power unit and mattress assembly components for visible blood or body fluids.
7. Perform one of the following:
   - If blood is present, decontaminate the whole mattress product in line with current hospital or Nursing Home Guidelines.
   - If blood is not present, remove any soil from the cover with paper towels.
   NOTE: Check underside of cover for 'strike-through'. If grossly soiled, the cover should be removed, cleaned and decontaminated.
8. Using a clean sponge or paper towel, wipe down the cover surface and cells with a diluted detergent solution or recommended cleaner disinfectant or other germicidal detergent solution.
9. Cleaning and disinfection may be carried out on the cover with hand hot water and a neutral detergent or with a sodium hypochlorite solution (0.1% or 1000 parts per million available chlorine).

10. Alternatively remove the cover and launder, 70º C (160º F), using normal detergents. It is essential that articles be thoroughly dried after all cleaning procedures and before storage
11. Perform the following steps to clean the power unit and hose fittings:
    - Wipe all controls, chassis and hose fittings with a damp cloth and a mild detergent.
    - Using a nylon brush, gently clean all crevices as they can contain micro-organisms.
    - Air dry all treated surfaces.

WARNING:

- **Switch off the electrical supply to the pump and disconnect the power cable from the mains before cleaning and inspection.**
- **Protective clothing should be worn when performing cleaning procedures.**
- **Do not use Phenol based cleaning solution.**

All equipment should be inspected. Any item that is visibly soiled with the patient's blood or other body fluids should be properly cleaned or removed. It is recommended that the system is clean regularly and after each patient use.

In many cases it will be only be necessary to remove the mattress cover for cleaning. If there is obvious soiling a complete cleaning or decontamination will be required.

Replace Air Filter

1. Remove Air filter and Replace a new Filter.
2. Use a soft bristle brush to remove dust and difficult dried-on soil.

10. SPECIFICATION

Master Control Unit

Model No.	P-16AD Pump (M16-12)
Size (mm)	250(L)x110(W)x210(H)
Weight (Kg)	2.2
Cycle Time (min)	12 min
Min/Max Pressure	20 ~ 60 mmHg +/- 6 mmHg
Max Flow-rate	≥4.5 L/min
Rated Voltage	AC 100-240V, 50/60Hz
Max Current	0.2-0.1A
Fuse Rating	T2AL 250V
Protection Type	Class II, Type BF Not AP or AGP type
Ingress of Water Protection	IP21
Mode of Operation	Continuous
Operation Temperature	15°C to 40°C (59°F to 104°F)
Operation Humidity	Operation: 30% to 75% non-condensing
Operation Atmospheric Pressure Range	700.hPa to 1060 hPa

MATTRESS REPLACEMENT

Dimension in mm (L x W x H)	2000 x 880 x 200
Weight	8 Kg
Material:	Top Cover: PU laminated Nylon Base Cover: PVC laminated Polyester
Weight Capacity	180kg

11. EMC RELATED NOTIFICATION

Warning: Medical electrical equipment needs special precautions regarding EMC and needs to be installed according to the EMC information provided. Careful consideration of this information is essential when stacking or collocating equipment and when routing cables and accessories.

Warning: RF mobile communications equipment can effect medical electrical equipment.

Recommended separation distance between portable and mobile RF communications equipment and the HealthCo Royal

The HealthCo Royal is intended for use in an electromagnetic environment (for home healthcare and professional healthcare) in which radiated RF disturbances are controlled. The customer or the user of the HealthCo Royal can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the HealthCo Royal as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	80 MHz to 800 MHz $d = 1,2\sqrt{P}$	800 MHz to 2,5 GHz $d = 2,3\sqrt{P}$
0,01	N/A	0,12	0,23
0,1	N/A	0,38	0,73
1	N/A	1,2	2,3
10	N/A	3,8	7,3
100	N/A	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 : At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
NOTE 2 : These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Manufacturer's declaration-electromagnetic emissions

The HealthCo Royal is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below.
The customer or the user of the HealthCo Royal should assure that it is used in such an environment.

Emissions Test	Compliance	Electromagnetic Environment-Guidance (for home healthcare environment)
RF emissions CISPR 11	Group 1	The HealthCo Royal uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The HealthCo Royal is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage Fluctuations/ flicker emissions IEC 61000-3-3	Compliance	

Manufacturer's declaration-electromagnetic immunity			
The HealthCo Royal is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below. The customer or the user of the HealthCo Royal should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment-Guidance (for home healthcare and professional healthcare)**
Electrostatic discharge (ESD) IEC 61000-4-2	Contact:±8 kV Air±2 kV,±4 kV,±8 kV,±15 kV	Contact:±8 kV Air±2 kV,±4 kV,±8 kV,±15 kV	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/ output lines	+ 2kV for power supply lines+ Not applicable	Mains power quality should be that of a typical for home healthcare and professional healthcare environment.
Surge IEC 61000-4-5	+ 0.5kV, +1kV line(s) to line(s) + 0.5kV, +1kV,+ 2kV line(s) to earth	+ 0.5kV, +1kV line(s) to line(s) Not applicable	Mains power quality should be that of a typical for home healthcare and professional healthcare environment.
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Voltage dips: 0 % UT; 0,5 cycle 0 % UT; 1 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle	Voltage dips: 0 % UT; 0,5 cycle 0 % UT; 1 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle	Mains power quality should be that of a typical for home healthcare and professional healthcare environment. If the user of the HealthCo Royal requires continued operation during power mains interruptions, it is recommended that the HealthCo Royal be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m 50 Hz or 60 Hz	30 A/m 50 Hz, 60 Hz	The HealthCo Royal power frequency magnetic fields should be at levels characteristic of a typical location in a typical for home healthcare and professional healthcare environment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			

Manufacturer's declaration-electromagnetic immunity

The HealthCo Royal is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below.
The customer or the user of the HealthCo Royal should assure that is used in such and environment.

Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment-Guidance (for home healthcare and professional healthcare environment)**
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz e) 10 V/m 80 MHz – 2,7 GHz b) 80 % AM at 1 kHz c)	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz e) 10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	Portable and mobile RF communications equipment should be used no closer to any part of the HealthCo Royal including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P}$ 80MHz to 800 MHz $d = 2,3 \sqrt{P}$ 800MHz to 2,7 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the HealthCo Royal is used exceeds the applicable RF compliance level above, the HealthCo Royal should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the HealthCo Royal.
b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Manufacturer's declaration-electromagnetic immunity
Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

The HealthCo Royal is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below.
The customer or the user of the HealthCo Royal should assure that it is used in such an environment.

Test frequency (MHz)	Band [a] (MHz)	Service [a]	Modulation [b]	Maximum power (W)	Distance (m)	Immunity Test Level (V/m)	Compliance LEVEL (V/m) (for home healthcare)
385	380-390	Tetra 400	Pulse modulation b) 18 Hz	1,8	0,3	27	27
450	430-470	GMRS 460, FRS 460	FM c) ±±5 kHz deviation 1 kHz sine	2	0,3	28	28
710	704-787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0,2	0,3	9	9
745							
780							
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation b) 18 Hz	2	0,3	28	28
870							
930							
1720	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation b) 217 Hz	2	0,3	28	28
1845							
1970							
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0,3	28	28
5240	5100-5800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0,2	0,3	9	9
5500							
5785							

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

a. For some services, only the uplink frequencies are included.
b. The carrier shall be modulated using a 50 % duty cycle square wave signal.
c. As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.

12. WASTE DISPOSAL

This Product has been supplied by an environmentally conscious manufacturer and complies with the WEEE.

This product may contain substances that can be harmful to the environment if disposed of in places that are not approved by your state, local or federal laws. Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

13. STORAGE AND CARE

Master Control Unit:

- Check the power cord and plug for abrasions and excessive wear.
- Plug in the unit and verify air flow from the hose connection ports.
- Place in plastic bag for storage.

Mattress:

- Check the air manifold for kinks or breaks and replace if necessary.
- Set CPR valve to "OPEN" and disconnect the air hose from the control unit. The mattress will now deflate and can be packed for storage.

It is recommended that the following proceedings are used whenever the system is being stored or transported to another location:
Temperature Limitations: 5°C (41°F) ~ 60°C (140°F)
Relative Humidity: 30% ~75%

14. SYMBOL DEFINITION

	Type BF Protection Against Electronic Shock		Class II Equipment
	Waste Disposal		Refer to Instruction Manual
	Alternating Current		

15. EXPECTED SERVICE LIFE

The HealthCo Royal pump has an expected service life of 5 years. To maintain the condition of the pump have it serviced regularly according to the recommended schedule. Do NOT use unapproved accessories or attempt to modify, disassemble or otherwise misuse the system..

16. WARRANTY

- HealthCo warrants this equipment to be free from defects in material and workmanship for up to 12 months from the date of delivery.
- All warranty work will be performed at the service address below, shipping charges prepaid.
- At Manufacturers discretion we agree to service, repair or replace any equipment or part found to be defective at no charge.
- This warranty excludes equipment damaged through shipping, tampering, improper maintenance, carelessness, accident, negligence, misuse, or which has been altered, repaired or dismantled other than with the manufacturer's written authorisation and by its approved procedures and by properly qualified technicians.
- In no event shall HealthCo be liable for any direct, indirect or consequential damage or loss resulting from the use of equipment.

17. DISCLAIMER

WARNING: The use of side rails and other restraints can result in injury or death - through potential entrapment and potential patient falls. Please see MHRA Device Bulletin DB 2006(06) for details.

WARNING: Risk of electrical shock, serious injury or death. Only authorised technicians should open the pump unit for servicing and maintenance procedures. Electrical equipment can be extremely dangerous if damage or misused.

WARNING: Before any cleaning or disinfection procedure, ensure that the pump system is switched off and unplugged from the mains power supply.

LEGAL DISCLAIMER

A. Terms such as 'Medium Risk', 'High Risk' and 'Very High Risk' are a description of a person's risk levels, these persons may be at danger of developing a pressure sore at the higher risk status level. These risk levels are assessed by nurses and as there is a variability between nurse measurements/observations. Descriptive risk levels should only be used as guideline for the risk assessment methods being used.

B. HealthCo uses these factors and terms based on the existing market research and internal research to show the suitability and effectiveness of the pressure care systems provided. Internal and external research is and will always be ongoing. These risk factors should not be taken as prescriptive criteria.

C. HealthCo support surfaces should be seen as an aid to care and DO NOT replace the need for good nursing care and intervention. All HealthCo products must be used as part of an individualised care plan which include proper nursing practices i.e. turning/re-positioning, and regular patient skin assessments.

D. Pressure relieving equipment alone will not prevent pressure ulcers. Pressure ulcers are multi factorial and many external and internal factors cause them to develop. It is up to the professional judgement of the nurse to assess the risk and develop a care plan which prescribes suitable pressure reducing/relieving equipment and external care. Some pressure sores are inevitable due to falls and periods of immobility these sores can develop hours after the injury, in these instances a pressure ulcer can develop and HealthCo cannot guarantee the use of the equipment alone will prevent pressure ulcer formation.

E. The mattress usage guidance within this user guide in relation to clinical guidance, should always be operated in accordance with best clinical practice outlined by the care giver.